

WHAT IS CLAIMED IS:

1. A process for producing a xylylenediamine by hydrogenating a dicyanobenzene in a liquid phase in the presence of a catalyst, the process comprising a step of bringing the catalyst having its activity decreased during  
5 the course of the hydrogenation of dicyanobenzene into contact with a hydrogen-containing gas at 200 to 500°C while controlling a temperature rise speed of the catalyst to 40°C/min or less, thereby regenerating the catalyst; and a step of reusing the catalyst thus regenerated in the subsequent hydrogenation of the dicyanobenzene.
- 10 2. The process according to Claim 1, wherein a feed rate of hydrogen is regulated so as to control a temperature rise speed of the catalyst to 40°C/min or less during under contact with the hydrogen-containing gas.
3. The process according to Claim 1, wherein the step for regenerating the catalyst comprises the following treatments (1) and (2):  
15 (1) bringing the catalyst into contact with a hydrogen-containing gas at 140 to 200°C for one hour or longer while controlling an average treating temperature to 180°C or lower, and then  
(2) further bringing the catalyst thus treated into contact with a hydrogen-containing gas at 200 to 500°C.
- 20 4. The process according to Claim 1, wherein the hydrogenation of dicyanobenzene is conducted in a fixed bed reactor.
5. The process according to Claim 1, wherein the catalyst is a nickel- and/or cobalt-containing catalyst.
6. The process according to Claim 1, wherein the catalyst is a nickel-  
25 containing catalyst.
7. A process for producing a xylylenediamine by hydrogenating a dicyanobenzene in a liquid phase in the presence of a catalyst, the process comprising a step of regenerating the catalyst having its activity decreased during the course of the hydrogenation of the dicyanobenzene by the following

treatments (1) and (2):

(1) bringing the catalyst into contact with a hydrogen-containing gas at 140 to 200°C for one hour or longer while controlling an average treating temperature to 180°C or lower, and then

5       (2) further bringing the catalyst thus treated into contact with a hydrogen-containing gas at 200 to 500°C; and

a step of reusing the catalyst thus regenerated in the subsequent hydrogenation of the dicyanobenzene.

8.   The process according to Claim 7, wherein the step (1) is performed  
10 while controlling a temperature rise speed of the catalyst to 40°C/min or less.

9.   The process according to Claim 8, wherein the step (1) is performed while regulating a feed rate of the hydrogen-containing gas so as to control the temperature rise speed of the catalyst to 40°C/min or less.

10.   The process according to Claim 9, wherein the step (1) is performed  
15 by feeding the hydrogen-containing gas at a rate of 0.001 to 1000 L/h on a basis of a normal state of 0°C and 1 atm per 1 kg of the catalyst.

11.   The process according to Claim 7, wherein the steps (1) and (2) are performed while controlling a temperature rise speed of the catalyst to 40°C/min or less.

20       12.   The process according to Claim 11, wherein the steps (1) and (2) are performed while regulating a feed rate of the hydrogen-containing gas so as to control the temperature rise speed of the catalyst to 40°C/min or less.

13.   The process according to Claim 12, wherein the steps (1) and (2) are performed by feeding the hydrogen-containing gas at a rate of 0.001 to  
25 1000 L/h on a basis of a normal state of 0°C and 1 atm per 1 kg of the catalyst.

14.   The process according to Claim 7, wherein the hydrogenation of dicyanobenzene is conducted in a fixed bed reactor.

15.   The process according to Claim 7, wherein the catalyst is a nickel- and/or cobalt-containing catalyst.

16. The process according to Claim 7, wherein the catalyst is a nickel-containing catalyst.